AD-A087 465 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19703B MLRS, MISSILE NUMBERS 33, 31, ROUND NUMBERS B-93, B-94, --ETC(U)
FEB 80

UNCLASSIFIED ERADCOM/ASD-DR-1134 NL

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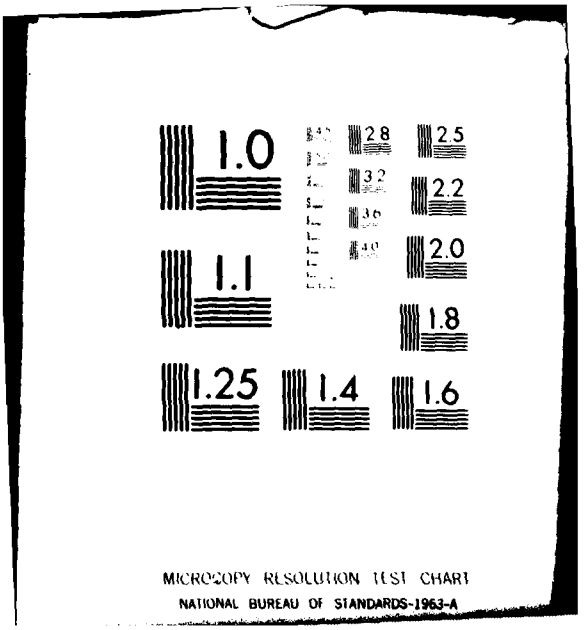
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1.8
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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4. TITLE (and Subtitle): (6) 19703B MLRS, Misssile Numbers 33, 31, Round Numbers B-93, B-94, 13 February 1980.	5. TYPE OF REPORT & PERIOD COVERED: (9) Meteorological Data rept.
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18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of 19703B MLRS, Missile Numbers 33, 31, Round Numbers B-93, B-94 are presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

410663

CONTENTS

INTRODUCTION

19703B MLRS, Missile Numbers 33, 31, Round Numbers B-93, B-94, _____, were launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 1408:01, 1522:01 MST, 13 February 1980.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (^{o}F), relative humidity, dew point (^{o}F), wind direction and speed, and cloud cover were made at the "C" Station Met Site.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE	
LC-39	2 Km
NICK	2 Km

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME	
LC-37	1400 MST
LC-37	1600 MST

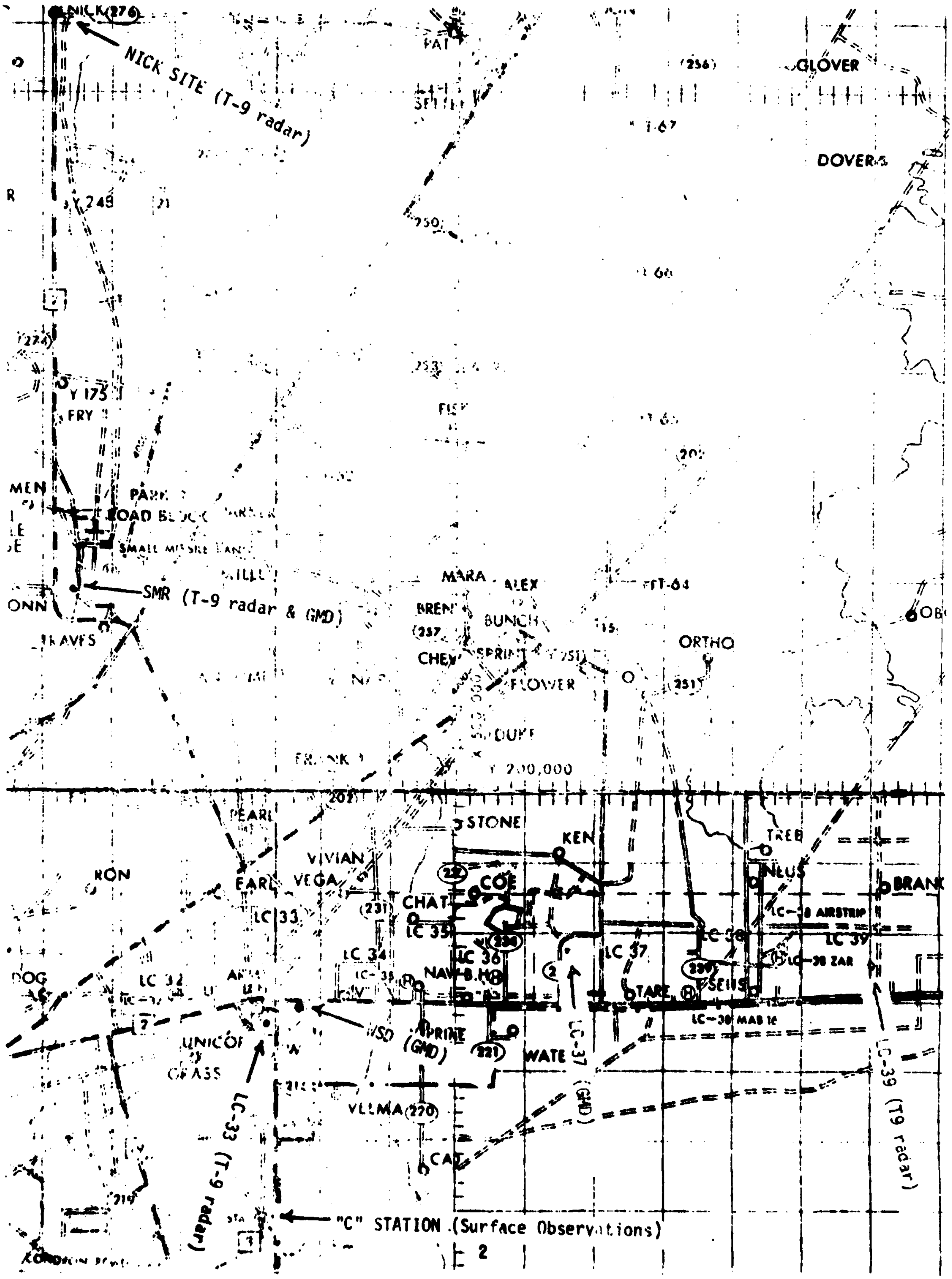
NICK (276)
NICK SITE (T-9 radar)
PAT
(256)
GLOVER
DOVER
250
Y 175
FRY
PARK
ROAD BLOCK
SMALL MISSILE TANK
SMR (T-9 radar & GMD)
MARA
ALEX
BREN
BUNCH
CHEV
SPRINT
FLOWER
DUKE
ORTHO
Y 200,000
STONE
KEN
TREE
PEARL
RON
VIVIAN
EARL
VEGA
COE
CHAT
LC 33
LC 35
LC 34
LC 36
LC 37
LC 39
LC-39 AIRSTRIP
BRANK
NAV B.H.
STARE
SEUS
LC 32
LC-39 MAB 1E
WSD (GMD)
PRIME
WATE
UNICOF
GRASS
LC-37 (GMD)
LC-39 (T9 radar)
LC-33 (T-9 radar)
VELMA (220)
CAD
"C" STATION (Surface Observations)

TABLE 1

SURFACE OBSERVATIONS OBTAINED FROM "C" STATION ON 13 February 1980

TIME MST	SKY CONDITIONS	VSBY	WEATHER OR TOPOGRAPHY TO VISIBILITY					
								SPEED
0058	120SCT250SCT	20		25.950	24	29	160	10
0158	120SCTE250BKN	20		25.950	32	27	E100	06
0258	120SCT250SCT	20		25.950	34	29	010	05
0358	120SCT250SCT	20		25.930	32	25	E130	07
0458	120SCT250SCT	20		25.940	30	26	E100	03
0558	120SCTE250BKN	20		25.940	31	25	010	03
0658	60SCT120SCTE250BKN	30		25.960	32	24	020	03
0758	E60BKN120BKN250BKN	50		25.990	34	30	340	03
0858	E60BKN120BKN	50		25.995	41	33	090	04
0958	60SCTE120BKN250BKN	50		26.005	49	34	340	03
1058	120SCT250SCT	50		25.990	55	37	360	05
1158	65SCT120SCT250SCT	50		25.960	60	38	150	04
1258	65SCT120SCTE250BKN	50		25.935	60	37	270	04
1358	65SCT120SCTE250BKN	50		25.900	65	38	210	08
1458	65SCTE120BKN250BKN	50		25.885	66	36	210	08
1558	65SCTE120BKN250BKN	50		25.880	65	37	210	08
1658	65SCTE120BKN250BKN	50		25.880	62	36	200	08
1758	E120BKN250BKN	30		25.890	57	38	150	07
1858	E120BKN250BKN	20		25.905	56	37	160	06
1958	E1200VC	20		25.920	55	42	340	04
2058	E1200VC	20	L-	25.935	53	44	110	05
2158	E1200VC	20	L-	25.935	51	44	E120	05
2258	E1200VC	20		25.925	53	43	E120	05
2358	E600VC	20	RW-	25.925	52	45	150	08

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM LC-39 DATE 13 February 1980 TIME 1400 MST

TRACKER COORDINATES (WSTM) X= 530,938.82 Y= 186,564.96 H= 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL X OR FEET AGL ___.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	248	05
90	251	06
150	253	09
210	272	09
270	279	07
330	264	07
390	265	09
500	250	07
650	240	09
800	228	09
950	221	10
1150	217	11
1350	227	10
1550	233	10
1750	240	13
2000	254	14

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

PILOT BALLOON MEASURED WIND DATA

TABLE 3

RELEASED FROM NICK DATE 13 February 1980 TIME 1500 MST

TRACKER COORDINATES (WSTM) X= 470,734.56 Y= 255,755.64 Z= 4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL x OR FEET AGL ___.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	200	05
90	237	04
150	209	04
210	216	06
270	165	05
330	156	08
390	160	08
500	200	07
650	183	06
800	223	06
950	245	09
1150	246	11
1350	250	11
1550	252	15
1750	249	15
2000	240	13

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-39 DATE 13 February 1980 TIME 1515 MST

TRACKER COORDINATES (WSTM) X= 530,938.82 Y 186,564.96 H 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO **TRUE NORTH**

HEIGHTS ARE METERS AGL X OR FEET AGL ___.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	217	09
90	220	09
150	226	13
210	221	12
270	202	10
330	209	16
390	219	17
500	232	18
650	229	16
800	227	16
950	229	14
1150	246	11
1350	231	08
1550	217	08
1750	231	10
2000	249	18

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 60 1400 HRS MST
ASCENSION NO. 10

SIGNIFICANT LEVEL DATA
0440160010
LC-37

GEODETIC COORDINATES
32.41141 LAT DEG
106.30852 LON DEG

TABLE 5

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
875.4	4047.3	17.7	.4	51.0
869.0	4252.0	14.5	.7	59.0
850.0	4865.2	12.5	.3	63.0
798.2	6580.3	7.4	-1.0	65.0
736.0	8754.8	1.7	-2.6	73.0
700.0	10074.6	-2.0	-3.7	88.0
621.8	13137.9	-8.2	-8.5	98.0
612.6	13514.1	-8.9	-19.7	41.0
603.8	13887.4	-7.7	-18.1	43.0
586.2	14641.8	-9.3	-17.5	51.0
568.8	15764.5	-11.0	-22.2	39.0
544.4	16511.8	-12.7	-22.9	42.0
520.4	17634.7	-14.9	-22.7	51.0
500.0	18630.0	-17.0	-25.4	48.0
459.8	20682.9	-21.0	-31.8	37.0
438.6	21822.7	-24.2	-31.0	53.0
409.5	23454.0	-29.1	-31.6	79.0
400.0	24005.8	-29.4	-34.0	64.0
391.6	24503.4	-30.5	-36.2	57.0
385.4	24875.9	-31.6	-37.2	57.0
348.4	27196.5	-37.7	-47.7	34.0
331.0	28351.5	-40.9	-49.4	39.0
300.0	30525.2	-46.9		
266.8	33049.8	-53.0		

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 80 1400 HRS MST
ASCENSION NO. 10

UPPER AIR DATA
044013U010
LC-37

GEODETIC COORDINATES
32.41141 LAT DEG
106.30852 LON DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4047.3	875.4	17.7	.4	31.0	1045.7	665.3	300.0	1.0	1.000201
4500.0	861.2	13.7	.6	40.6	1043.1	660.7	249.5	1.4	1.000202
5000.0	845.8	12.1	.2	44.0	1030.0	658.9	230.1	2.5	1.000200
5500.0	830.4	10.6	-.1	47.5	1016.7	657.2	222.6	3.7	1.000295
6000.0	815.3	9.1	-.5	50.9	1003.5	655.4	218.2	5.1	1.000292
6500.0	800.6	7.6	-1.0	54.4	990.5	653.7	215.5	6.8	1.000244
7000.0	785.8	6.3	-1.2	58.5	976.9	652.1	219.7	7.5	1.000265
7500.0	771.3	5.0	-1.5	62.6	963.4	650.6	223.7	8.2	1.000261
8000.0	757.0	3.7	-1.9	66.8	950.1	649.0	227.7	8.8	1.000258
8500.0	743.0	2.4	-2.4	70.9	937.0	647.5	233.0	10.7	1.000254
9000.0	729.2	1.0	-2.8	75.8	924.1	645.9	237.1	13.1	1.000251
9500.0	715.4	-.4	-3.2	81.5	911.4	644.2	242.7	15.2	1.000248
10000.0	702.0	-1.8	-3.6	87.2	898.9	642.6	247.2	17.3	1.000244
10500.0	688.6	-2.9	-4.4	89.4	885.3	641.3	251.7	20.3	1.000240
11000.0	675.4	-3.9	-5.1	91.0	871.7	640.0	254.9	23.5	1.000216
11500.0	662.5	-4.9	-5.9	92.7	858.3	638.8	256.0	26.1	1.000212
12000.0	649.8	-5.9	-6.7	94.3	845.2	637.6	256.8	28.3	1.000208
12500.0	637.3	-6.9	-7.4	95.9	832.2	636.3	257.5	29.6	1.000204
13000.0	625.1	-7.9	-8.2	97.5	819.4	635.1	256.1	30.8	1.000200
13500.0	613.0	-8.9	-18.9	43.7	807.4	633.8	252.9	31.2	1.000167
14000.0	601.1	-7.9	-18.0	44.2	796.9	634.7	248.3	31.2	1.000164
14500.0	589.5	-9.0	-17.6	49.5	776.6	633.5	246.5	32.1	1.000161
15000.0	578.0	-9.8	-18.3	47.2	764.0	632.4	248.6	30.8	1.000178
15500.0	566.7	-10.6	-21.0	41.8	751.3	631.5	253.0	28.5	1.000174
16000.0	555.6	-11.5	-22.4	39.9	739.3	630.3	260.0	26.3	1.000170
16500.0	544.7	-12.7	-22.3	42.0	727.9	629.0	262.7	26.6	1.000168
17000.0	533.9	-13.7	-22.8	45.9	716.2	627.8	262.0	28.8	1.000165
17500.0	523.3	-14.6	-22.7	49.9	704.7	626.6	260.3	30.9	1.000163
18000.0	512.9	-15.7	-23.7	49.9	693.4	625.3	258.3	33.0	1.000160
18500.0	502.6	-16.7	-25.3	48.4	682.4	624.0	257.6	34.0	1.000157
19000.0	492.5	-17.7	-26.5	46.0	671.3	622.8	257.3	34.4	1.000154
19500.0	482.6	-18.7	-28.6	43.3	660.3	621.6	256.9	34.6	1.000151
20000.0	472.8	-19.7	-29.6	40.7	649.5	620.4	256.4	35.1	1.000148
20500.0	463.2	-20.6	-31.2	38.0	638.9	619.2	256.7	35.5	1.000145
21000.0	453.8	-21.9	-31.4	41.5	629.0	617.6	253.3	36.1	1.000143
21500.0	444.5	-23.3	-31.1	48.5	619.5	615.9	250.3	36.9	1.000141
22000.0	435.3	-24.7	-31.3	55.8	610.3	614.1	249.1	38.0	1.000139
22500.0	426.3	-26.2	-31.3	63.8	601.2	612.3	248.3	40.3	1.000137
23000.0	417.4	-27.7	-31.2	71.8	592.3	610.4	248.1	43.7	1.000135
23500.0	408.7	-29.1	-31.8	77.7	583.2	608.7	249.0	45.8	1.000133

UPPER AIR DATA
0440180010
LC-37

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 80 1400 HRS MST
ASCENSION NO. 10

GEODETIC COORDINATES
32.41141 LAT DEG
106.30852 LON DEG

TABLE 6 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	400.1	-29.4	-34.0	64.2	571.6	608.3	201.8	47.5	1.000129
24500.0	391.7	-30.5	-36.2	57.0	562.1	606.9	202.3	45.6	1.000127
25000.0	383.3	-31.9	-37.4	55.8	553.5	605.1	203.1	43.9	1.000125
25500.0	375.1	-33.2	-39.9	50.8	544.5	603.5	204.6	43.2	1.000123
26000.0	367.0	-34.6	-42.1	45.9	535.8	601.8	206.2	42.8	1.000120
26500.0	359.1	-35.9	-44.3	40.9	527.2	600.1	207.8	42.9	1.000118
27000.0	351.4	-37.2	-46.7	35.9	518.7	598.5	209.0	42.6	1.000116
27500.0	343.7	-38.5	-48.1	35.3	510.4	596.7	210.6	41.9	1.000114
28000.0	336.2	-39.9	-48.5	37.5	502.1	595.0	208.6	42.4	1.000112
28500.0	328.8	-41.3	-50.4	36.3**	494.0	593.2	207.2	43.3	1.000110
29000.0	321.4	-42.7	-54.0	27.4**	485.9	591.4	205.9	44.7	1.000108
29500.0	314.2	-44.1	-58.3	18.4**	477.9	589.6	204.2	45.7	1.000107
30000.0	307.2	-45.5	-64.6	9.4**	470.0	587.9	201.7	46.3	1.000105
30500.0	300.3	-46.8	-85.0	.5**	462.3	586.1	259.4	46.2	1.000103
31000.0	293.5	-48.0			454.1	584.5	257.2	45.7	1.000101
31500.0	286.7	-49.3			446.1	582.9	255.4	43.5	1.000099
32000.0	280.1	-50.5			438.2	581.4			1.000098
32500.0	273.7	-51.7			430.5	579.8			1.000096
33000.0	267.4	-52.9			422.9	578.2			1.000094

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 60 1400 HRS MST
ASCENSION NO. 10

MANDATORY LEVELS
0441A0010
LC-37

GEODETIC COORDINATES
32.41141 LAT DEG
106.30852 LON DEG

TABLE 7

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4860.	12.5	.3	43.	233.6	2.2
800.0	6514.	7.6	-1.0	55.	215.7	6.8
750.0	8246.	3.0	-2.1	69.	230.1	9.5
700.0	10065.	-2.0	-3.7	68.	247.8	17.7
650.0	11987.	-5.9	-6.6	94.	256.8	26.3
600.0	14032.	-8.0	-17.9	45.	248.1	31.3
550.0	16234.	-12.1	-22.6	41.	263.2	25.5
500.0	18604.	-17.0	-25.4	48.	257.3	34.1
450.0	21173.	-22.5	-31.3	44.	256.7	36.4
400.0	23966.	-29.4	-34.0	64.	261.8	47.5
350.0	27044.	-37.4	-47.1	35.	269.2	42.5
300.0	30466.	-46.9			259.4	46.2

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 88 1600 HRS MST
ASCENSION NO. 11

SIGNIFICANT LEVEL DATA
044013U0011
LC-37

GEODETIC COORDINATES
32.41141 LAT DEG
106.30452 LON DEG

TABLE 8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
874.8	4047.3	17.3	1.7	35.0
850.0	4847.6	13.4	.4	41.0
770.2	7535.6	5.6	-2.0	58.0
721.6	9272.9	.6	-1.9	83.0
700.0	10072.2	-1.8	-2.5	95.0
647.2	12110.3	-5.8	-6.7	93.0
629.0	12846.0	-5.6	-13.6	53.0
602.4	13955.4	-7.9	-17.0	48.0
567.8	15457.2	-11.5	-20.3	48.0
542.4	16607.8	-13.1	-17.4	70.0
517.4	17785.6	-15.4	-19.9	68.0
500.0	18631.7	-17.7	-20.7	77.0
485.2	19369.6	-19.2	-20.2	92.0
477.4	19765.7	-20.0	-22.7	79.0
461.8	20573.5	-21.9	-25.6	86.0
431.4	22212.3	-25.1	-30.4	81.0
400.0	24003.6	-29.4	-35.5	55.0
387.8	24723.4	-30.7	-40.3	38.0
374.0	25572.9	-32.6	-43.3	33.0
353.6	26862.8	-36.6	-43.6	47.0
333.6	28189.5	-40.2	-44.3	64.0
327.2	28614.5	-41.4	-45.9	61.0
300.0	30531.8	-46.7	-49.6	70.0
260.4	33573.8	-54.0		
250.0	34434.4	-54.5		
200.0	39165.7	-52.3		
174.8	42021.4	-53.4		

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 80 1600 HRS MST
ASCENSION NO. 11

UPPER AIR DATA
04401800U11
LC-37

GEODETIC COORDINATES
32.41141 LAT DEG
106.50852 LON DEG

TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4047.3	874.8	17.3	1.7	35.0	1046.1	604.9	210.0	4.9	1.000264
4500.0	860.7	15.1	1.0	38.4	1037.2	602.4	219.6	6.0	1.000261
5000.0	845.3	13.0	.4	42.0	1026.3	599.9	220.6	7.3	1.000258
5500.0	829.9	11.5	.0	45.1	1012.8	596.2	222.9	8.7	1.000254
6000.0	814.8	10.1	-.4	48.3	999.5	592.5	225.1	10.0	1.000251
6500.0	800.0	8.6	-.3	51.5	986.5	594.6	229.1	10.4	1.000247
7000.0	785.5	7.2	-1.4	54.6	973.6	593.1	234.2	10.5	1.000244
7500.0	771.2	5.7	-2.0	57.8	961.0	591.4	238.4	9.9	1.000240
8000.0	756.9	4.3	-1.8	64.7	947.9	589.7	242.8	8.7	1.000236
8500.0	742.8	2.8	-1.7	71.9	935.1	588.1	245.9	8.4	1.000235
9000.0	729.0	1.4	-1.8	79.1	922.5	586.4	246.6	8.8	1.000232
9500.0	715.4	-.1	-2.1	86.4	910.1	584.7	246.5	10.7	1.000229
10000.0	701.9	-1.6	-2.4	93.9	897.9	582.9	246.0	13.4	1.000226
10500.0	688.6	-2.6	-3.4	94.6	886.4	581.6	245.5	16.5	1.000223
11000.0	675.5	-3.6	-4.4	94.1	870.9	580.4	244.6	19.9	1.000217
11500.0	662.6	-4.6	-5.5	93.6	857.5	579.2	243.5	23.6	1.000212
12000.0	650.0	-5.6	-6.5	93.1	844.4	577.9	238.9	24.7	1.000210
12500.0	637.5	-5.7	-9.9	71.8	826.9	577.7	235.2	25.2	1.000200
13000.0	625.2	-5.9	-14.1	52.3	814.1	577.2	233.5	24.8	1.000192
13500.0	613.2	-7.0	-15.5	50.1	801.6	576.0	230.7	25.4	1.000188
14000.0	601.3	-8.0	-17.1	48.0	789.3	574.7	241.3	26.5	1.000184
14500.0	589.6	-9.2	-18.2	48.0	777.5	573.2	245.8	26.8	1.000181
15000.0	578.1	-10.4	-19.3	48.0	765.8	571.8	250.1	27.1	1.000178
15500.0	566.8	-11.6	-20.1	48.8	754.2	570.4	254.5	27.4	1.000175
16000.0	555.7	-12.3	-19.7	58.4	741.3	569.0	257.8	28.0	1.000173
16500.0	544.7	-13.0	-17.6	67.9	728.5	567.8	257.5	29.0	1.000171
17000.0	533.9	-13.9	-18.2	69.3	716.7	566.6	256.9	29.9	1.000168
17500.0	523.4	-14.8	-19.3	68.5	705.1	565.4	255.9	30.7	1.000165
18000.0	512.9	-16.0	-20.1	70.3	694.2	564.0	256.3	31.6	1.000162
18500.0	502.7	-17.3	-20.6	75.6	683.9	562.4	257.6	33.2	1.000159
19000.0	492.8	-18.4	-20.4	84.5	673.1	562.0	257.6	34.7	1.000157
19500.0	482.8	-19.5	-21.0	87.7	662.1	560.8	257.5	36.1	1.000154
20000.0	472.8	-20.6	-22.9	81.0	651.6	559.4	256.6	36.2	1.000151
20500.0	463.2	-21.7	-23.5	85.4	641.3	558.0	255.6	36.1	1.000148
21000.0	453.7	-22.7	-25.3	79.5	630.7	556.7	253.5	36.2	1.000145
21500.0	444.4	-23.7	-27.3	71.9	620.2	555.5	251.2	36.3	1.000142
22000.0	435.2	-24.7	-29.5	64.2	609.9	554.2	248.4	36.2	1.000139
22500.0	426.2	-25.8	-31.2	60.0	600.0	552.8	245.5	36.2	1.000136
23000.0	417.3	-27.0	-32.6	58.4	590.4	551.3	240.1	36.1	1.000134
23500.0	408.6	-28.2	-34.1	56.7	580.9	549.8	247.7	35.9	1.000132

STATION ALTITUDE 4047.27 FEET MSL
19 FEB. 60 1600 HRS MST
ASCENSION NO. 11

UPPER AIR DATA
04401[illegible]0011
LC-37

GEODETIC COORDINATES
32.41141 LAT DEG
106.38452 LON DEG

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	400.1	-29.4	-35.3	55.0	571.6	608.3	250.0	37.9	1.000129
24500.0	391.6	-30.3	-38.7	43.4	561.6	607.2	252.3	40.6	1.000126
25000.0	383.3	-31.3	-41.3	36.4	552.1	606.9	253.1	42.5	1.000124
25500.0	375.2	-32.4	-43.1	33.4	542.9	604.5	253.6	44.3	1.000122
26000.0	367.1	-33.9	-43.3	37.6	534.5	602.6	253.4	46.3	1.000120
26500.0	359.2	-35.5	-43.5	43.1	526.4	600.6	253.2	48.3	1.000118
27000.0	351.5	-37.0	-43.8	48.6	518.3	598.7	251.9	49.5	1.000116
27500.0	343.8	-38.3	-43.9	55.2	510.0	597.0	251.0	50.2	1.000114
28000.0	336.3	-39.7	-44.2	61.7	501.7	595.3	250.6	49.0	1.000113
28500.0	328.9	-41.1	-45.5	61.8	493.6	593.5	251.0	48.5	1.000111
29000.0	321.5	-42.5	-46.7	62.8	485.5	591.7	251.5	48.7	1.000109
29500.0	314.3	-43.8	-47.7	65.2	477.5	590.0	251.6	49.0	1.000107
30000.0	307.3	-45.2	-48.7	67.5	469.7	588.2	251.9	49.3	1.000105
30500.0	300.4	-46.6	-49.7	69.9	462.0	586.4	252.5	49.1	1.000103
31000.0	293.5	-47.8	-52.3	59.2**	453.8	584.8	253.2	48.9	1.000101
31500.0	286.8	-49.0	-55.2	47.7**	445.7	583.2	253.5	46.5	1.000100
32000.0	280.2	-50.2	-58.5	36.2**	437.6	581.7	253.9	43.9	1.000[illegible]8
32500.0	273.7	-51.4	-62.5	24.7**	430.1	580.1	254.8	43.8	1.000096
33000.0	267.4	-52.6	-67.1	13.2**	422.5	578.5	249.8	44.2	1.000094
33500.0	261.3	-53.8	-82.1	1.7**	415.0	577.0	249.3	46.8	1.000092
34000.0	255.2	-54.2			406.1	576.4	249.7	49.4	1.000090
34500.0	249.2	-54.5			397.0	576.1	252.3	52.2	1.000088
35000.0	243.4	-54.2			387.4	576.4	254.6	55.2	1.000086
35500.0	237.7	-54.0			377.9	576.7	257.3	58.8	1.000084
36000.0	232.2	-53.8			368.7	577.0	259.1	62.5	1.000082
36500.0	226.8	-53.5			359.8	577.3	257.6	66.1	1.000080
37000.0	221.5	-53.3			351.0	577.6	256.4	69.4	1.000078
37500.0	216.3	-53.1			342.5	577.9	254.3	71.6	1.000076
38000.0	211.3	-52.8			334.1	578.2	253.0	73.1	1.000074
38500.0	206.4	-52.6			326.0	578.5	252.8	73.4	1.000073
39000.0	201.6	-52.4			318.1	578.9	252.4	74.3	1.000071
39500.0	196.9	-52.4			310.7	579.8	251.6	75.7	1.000069
40000.0	192.3	-52.6			303.8	578.5	251.4	75.7	1.000068
40500.0	187.8	-52.8			297.0	578.3			1.000066
41000.0	183.3	-53.0			290.3	578.0			1.000065
41500.0	179.2	-53.2			283.8	577.8			1.000063
42000.0	175.0	-53.4			277.5	577.5			1.000062

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4847.27 FEET MSL
13 FEB. 80 1600 HRS MST
ASCENSION NO. 11

MANDATORY LEVELS
0440180011
LC-37

GEODETIC COORDINATES
32.41141 LAT DEG
106.30852 LON DEG

TABLE 10

PRESSURE	GEOPOTENTIAL	TEMPERATURE		RELATIVE	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	4844.	13.4	.4	41.	218.9	6.9
800.0	6504.	8.6	-.6	51.	229.2	10.4
750.0	8240.	3.6	-1.7	68.	245.4	8.2
700.0	10062.	-1.8	-2.5	95.	245.9	13.8
650.0	11980.	-5.6	-6.5	93.	239.0	24.7
600.0	14041.	-8.1	-17.2	48.	241.8	20.7
550.0	16238.	-12.6	-18.1	63.	257.7	28.5
500.0	18606.	-17.7	-20.7	77.	258.1	33.6
450.0	21167.	-23.1	-26.1	76.	252.0	36.2
400.0	23964.	-29.4	-35.5	55.	250.0	37.8
350.0	27047.	-37.2	-43.8	50.	251.8	49.7
300.0	30472.	-46.7	-49.8	70.	252.5	49.1
250.0	34361.	-54.5			251.9	51.7
200.0	39073.	-52.3			252.2	74.7
175.0	41900.	-53.4				